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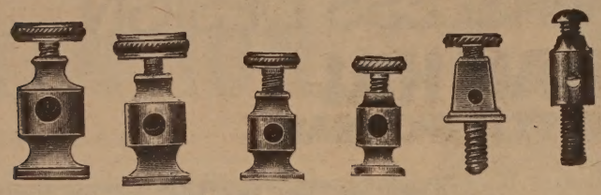
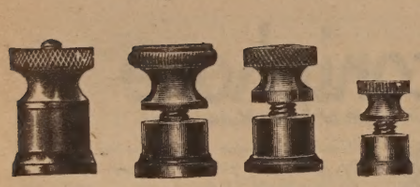
THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

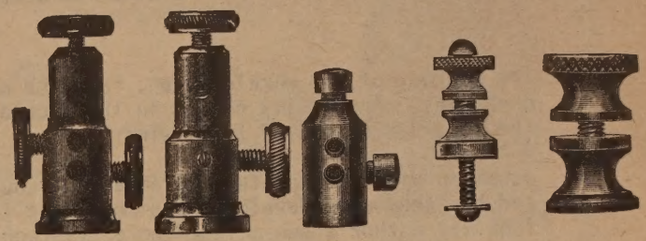
# THE HORN SPEAKER

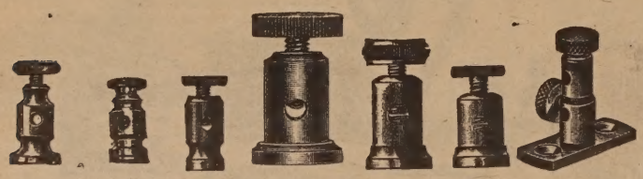
## Binding Posts

From The J. J. Duck Company Catalog No. 6, 1913

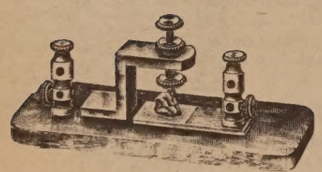








## Detectors

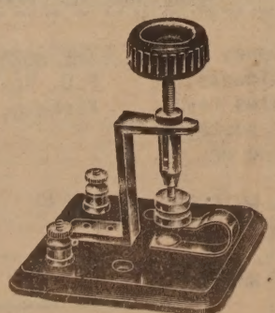


No. 60X12 Detector Stand is very simple in construction, and very sensitive. Any of the substances used with detectors may be used in this detector stand.

No. 60X12 Detector Stand only...$1.00

Postage 11c.

### IMPROVED PEROXIDE OF LEAD DETECTOR.



Our Improved Peroxide of Lead Detector is the result of much experimenting. The piston holding the upper electrode moves within our newly devised bushing. The resistance spring inside the bushing is held in place without danger of being thrown to one side or another, when using the detector, thus permitting of fine adjustment. All contacts as a result are perfectly made, giving an extremely sensitive instrument. The very serious and annoying defects common to several types of Peroxide of Lead detectors now on the market, are all avoided in this excellent detector.

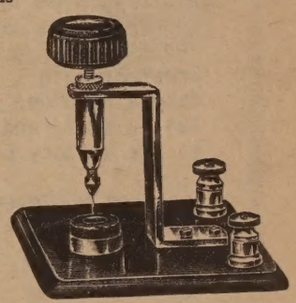
This detector is one of the most sensitive types of detectors yet devised. It works on a unique principle. Although no acids or liquids of any kind are used, the action is electrolytic. As is commonly known, this action is brought about by the plating of the detector plates between which the peroxide of lead pellet is placed.

This detector works only with a battery, and to obtain the best results, our Potentiometer should be used with it. The positive pole of battery must be connected to the post marked "X." It is especially desirable for portable sets, or sets subjected to shocks or jars. It will also retain its adjustment better than the majority of detectors. A good sized piece of Peroxide of Lead is provided with each detector. For short distance, a fine adjustment is not necessary, but a fairly good pressure should be brought upon the peroxide. For long distance work, very light adjustment is required.

No. 40X02 Improved Peroxide of Lead Detector..... .25

Postage 12c.

### ELECTROLYTIC DETECTOR.



Our improved electrolytic detector has the same marked improvements which characterize our Improved Peroxide of Lead detector. The piston holding the pin moves within our newly devised bushing. The resistance spring inside the bushing is held in place without danger of being thrown to one side or another when using the detector, thus permitting of fine adjustment. All contacts as a result are perfectly made, giving an extremely sensitive instrument. With practically all types of electrolytic detectors that have come to our attention, the Wollaston wire is wobbly and renders it very difficult to get a good adjustment. Another great advantage in this detector is the simple and easy manner in which the Wollaston wire is put in place. No tin coil is necessary to hold the wire in place. There is a slight aperture in the bottom of the pin, into which the Wollaston wire fits snugly. It is a very simple matter to put the wire into the pin, and once it is in, it cannot fall out.

The extreme sensitiveness of electrolytic detectors is conceded by all persons well posted in wireless. Many very expensive styles of electrolytic detectors are now in use throughout the country, and up to a few years ago it was impossible to purchase an electrolytic detector at a price which would place it within the reach of all persons. The electrolytic detector which we offer to our patrons is not by any means designed for experimental purposes, but may be used, and in fact is being used, at many stations where accurate work is required. It is unquestionably the best and most practical and efficient type of electrolytic detector on the market for the price.

Instead of the carbon to hold the acid, this detector has a graphite carbon cup, absolutely guaranteed not to leak. One of the most important features of an electrolytic detector consists in the mechanism used to raise and lower the fine Wollaston wire. With our detector the wire is moved up and down in a vertical direction, so that it may be dipped into the electrolyte (acid) to the precise depth required.

Wollaston wire is the very thinnest platinum wire obtainable, being 1/10,000 of an inch in diameter. The wire is silver plated, but when placed in the cup the silver is quickly dissolved by the acid. An inch of Wollaston wire should last for quite a long while. All metal parts are heavily silver plated to prevent electrolyte tarnishing the metal. The brilliant white metal parts in contrast with the hard rubber base and binding posts give to the instrument a most handsome and distinctive appearance.

The acid cannot be sent through the mails or by express. We furnish rubber-stoppered bottle and formula for preparing the electrolyte.

As the detector itself is a primary battery, no extra battery is necessary. However, battery may be used, if desired.

Our No. 66X82 potentiometer should always be used when a battery is in circuit, else the strong current will soon dissolve the fine Wollaston wire. The potentiometer will also eliminate the humming noises oftentimes heard in the receiver.

It is a simple matter to prepare the detector for work. The cup should be filled by using the pipette furnished with detector. It has been discovered that it is not necessary to draw off acid each time the detector is used. Place but one drop of ordinary kerosene oil on the acid in the carbon cup, using the pipette to do so. This will effectually prevent evaporation and the acid may be left in detector for weeks without the instrument being in the least affected. The solution can of course be kept in bottle tightly stoppered, to be used a great many times.

When connections are completed, screw down the thumbscrew far enough to permit of the Wollaston wire barely touching the solution. With a little experimenting the right immersion in the acid will be found, and the best regulation is reached when a faint hissing sound or click is heard in the receiver.

No. 61X06 Electrolytic Detector, complete....$1.25 Postage, 12c

Wollaston wire, .0001 thick, per inch..... .25 Postage, 2c

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# THE Cat's Whisker

## 50 YEARS OF WIRELESS DESIGN

## JONATHAN HILL

### PHOTOGRAPHS BY TREFOR BALL

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Jonathan Hill's complete and readable account of the sets and how they were developed has more than 120 illustrations from the author's own collection of vintage radios and components, early photographs of transmitting and receiving stations, wireless manuals, magazine advertisements and cartoons.

THE CAT'S WHISKER also contains a chronology of wireless history, from 1864 when James Clerk Maxwell presented his theory of the existence of electromagnetic waves to 1946 and the introduction of the BBC "Third Programme" in Great Britain. There is valuable information on how to date a receiver from the names of the stations on the tuning dial, and a bibliography of U.S. and British works on the history of radio broadcasting.

Everyone who even knows what THE CAT'S WHISKER means will find Hill's book a treasure house of information and delight. Order it today!

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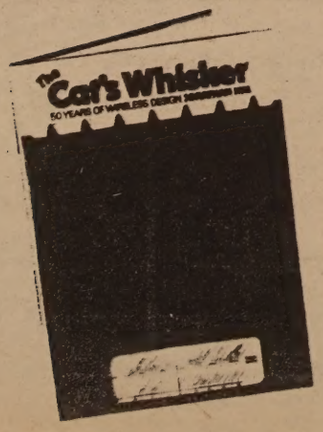


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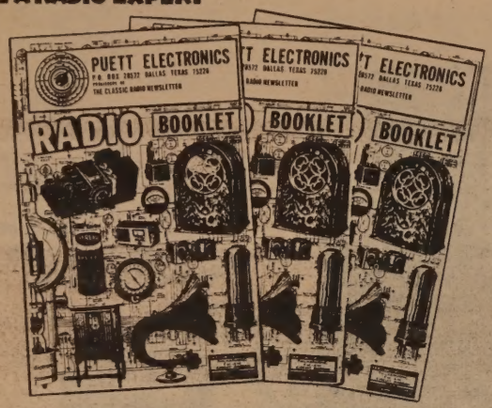


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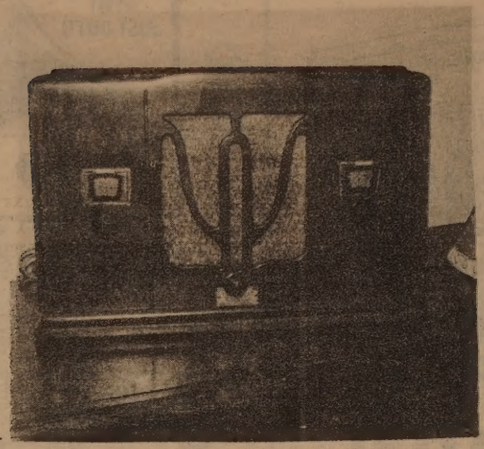


This is the correct picture.
The picture that was here last month was not the right one.

I wrote to Dick Ransley of AWA to identify a table model Grebe model 63A (picture inclosed) and he tried but without success, that is to tell me the approximate year of manufacture. He thought you might out through THE HORN SPEAKER. It intriques me because Grebe's workmanship was so good along with quality, but this set is badly put together, but it still has the Grebe trademark and has a beautiful enclosure.

Les Rayner
5512 N. 71st Place
Scottsdale AZ 85251



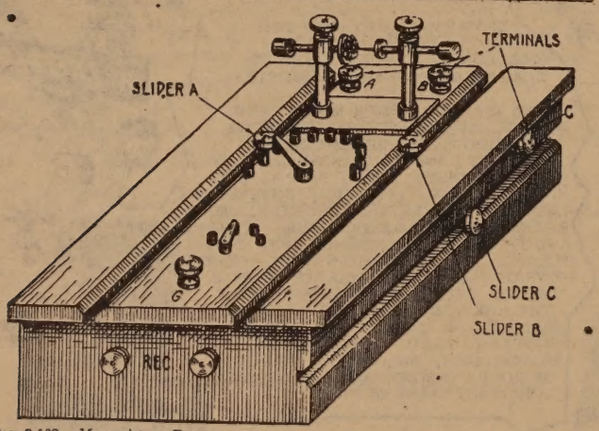



FIG. 3,162.—Marconi type D tuner. In adjusting, the wave length of the open circuit is varied by the sliders A and C. A closed oscillatory circuit is variably bridged around one of these coils, the inductance of which is varied by means of the sliding contact B. This circuit includes a carborundum crystal and a fixed condenser connected in series, a potentiometer and battery and the telephone receivers. When electric waves are brought to this tuner by *throwing up the aerial switch* the oscillations traverse these coils. Those produced in the second coil set up magnetic lines of force which interlink and cut through that part of the inductance included in the closed oscillatory circuit and pass through the detector, and being alternating in nature, surge through the condenser. Very interesting experiments have been made with the type D tuner, some of which will be noted here. If the A sliding contact be pushed up and off the open end of the first inductance one end of the loop aerial will be opened. Now the antenna would appear to have a very long wave length due to the fact that the linear length of the antenna is twice what it was before. But while the action of the loop aerial is not thoroughly understood, tests have shown that it has none of the characteristics of the ordinary plain aerial. Comparative tests were made when the antenna sliders A and C were on the inductance and when the A slider was pushed off, with the following results: With both the sliding contacts close to the open ends of the tuning coils, a wave length reading of 875 meters was taken. By pushing the A slider off the first coil, leaving the loop antenna connected only at one end like an ordinary plain aerial, a wave length reading of 930 meters was taken. Thus, by disconnecting one side of the loop, an increase of only 55 meters could be obtained. The reason for such a slight increase is due only to the fact that the antenna doubles back on itself and the open end of the loop vibrates along with the other wire or wires. To get the best results in receiving from stations operating with long wave lengths, the ground wire should be taken off the binding post G and the loop end of the aerial, connected at the post C, should be disconnected as in fig. 3,163. Then connect the ground wire to the post C and close together the two upper screws of the anchor gap, thereby short circuiting the ends of the loop and changing it to an ordinary plain aerial. The circuits will then be as shown in fig. 3,163 and will be capable of receiving wave lengths of over five thousand meters. In this way there will be no dead ends from the antenna and the first inductance coil by A slider will be converted into a variable loading coil in series with the second inductance which supplies energy to the detector circuits.



just mentioned are the only forms used commercially which require local battery current to operate them.

*Galena* is very sensitive when a clamped piece is touched by a thin copper wire, and thus completes the circuit.

*Silicon* is a sensitive detector and does not lose its adjustment easily. "Perikon" is the commercial name for a detector much used by the

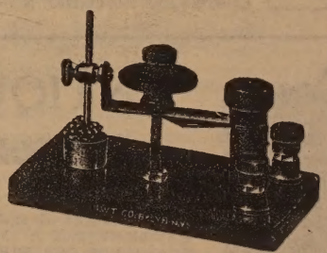


FIG. 3,166.—Crystal detector with double adjustment. This instrument is particularly designed to readily allow the delicate adjustment of any crystal or mineral. The very finest micrometer adjustment can be had by simply turning the hard rubber knob. It has two adjustments, one by means of the sharply pointed rod which can be lifted up or down and the other by the knob.

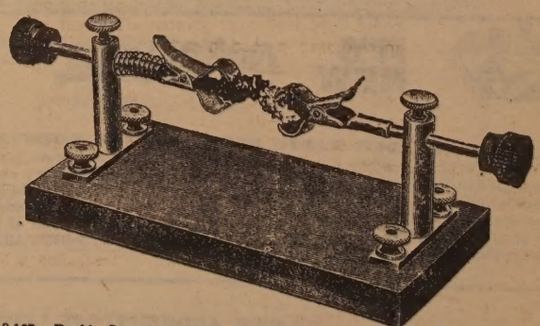
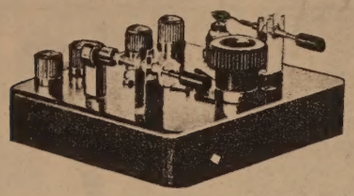


FIG. 3,167.—Double Crystal detector. Two crystals in contact often form a very sensitive detector, especially if one be an inactive substance and the other sensitive. This is the feature of the "perikon" detector. Carbon and carborundum may be used in this detector stand.

## TYPE DB CRYSTAL DETECTOR, STYLE NO. 307216

IN the base of this detector what is known as a blocking condenser is connected across the telephone terminals, thus making a very compact and complete unit.

The two types of detectors used on this unit are what is known as the "Pressure" type and the "Cat Whisker" type. In the former two selected minerals are held in pressed contact with each other. In the second type but a single crystal is used, the adjustment being made by means of a fine wire which may be moved about the crystal to locate sensitive spots.

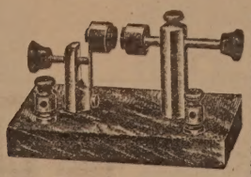


**Westinghouse Supersensitive Crystal Detector, Model DB .....$6.50**
**Dimensions:** 4⅜ in. x 4¼ in. x 2 in.
**Weights:** Net, 1 lb.; Shipping, 1½ lbs.
**Spare Crystals (Pressure Type) Model DE, $1.00**
**Spare Crystals (Cat Whisker) Model DD, $1.00**

**Note:** Crystal Detector, type DB, may be very satisfactorily employed with any standard receiving outfit and it has been specially designed for use with the type RA Tuner, described in the first part of this book.

Radio Enters the Home, R. C. A., 1922

## CARBORUNDUM DETECTOR, UNITED WIRELESS TYPE.



Carborundum is very satisfactory for use as a detector, as it is not affected by a heavy discharge when sending. This type of detector has been used for a number of years in the commercial stations of The United Wireless Company, and has proven itself to be the best. It consists of two large nickel plated standards, carrying carbon buttons, between which the crystal is set. The distance between the buttons is adjusted so that any size crystal may be accommodated. The adjusting screws are fitted with hard rubber heads. All metal parts are nickeled, and the base is of polished marble. This is a very excellent type of detector, and the fact that it is so largely used by one of the foremost wireless companies in the United States is sufficient evidence of its worth. Crystals not supplied with detector.

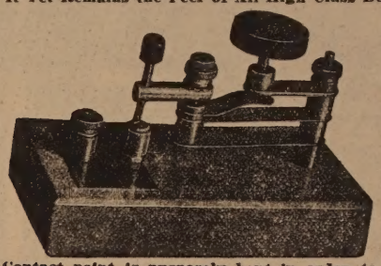
No. 77X83 Carborundum Detector.....$3.00
Postage 20c.

No. 77X92 A dion Detector. Improved type. (Cut and description received too late for insertion in catalog.)

No. 77X92. Audion Detector.....$4.00. Postage 25c

## CELEBRATED FERRON DETECTOR. (Improved Type)

**It Yet Remains the Peer of All High Class Detectors Licensed for Private Use.**



**Contact point is purposely bent in order to permit of contact with any part of crystal.**

Our celebrated Ferron Detector has so conclusively proven itself to be the peer of any moderate-priced detector on the market for practical and efficient work that extended comment on its many and exclusive points of superiority seems unnecessary. Each year, however, adds to the thousands of persons interesting themselves in wireless telegraphy, and it is consequently necessary to elaborate with some particularity upon the merits of this excellent detector, and at the same time to emphasize the importance of procuring a sensitive and efficient detector, if it is desired to obtain the best results with the receiving set.

This detector is without question the most inexpensive high class detector before the public. It will be found to be equally as sensitive, and to permit of as fine an adjustment, as the most expensive detectors licensed for commercial work. It is only because this detector is licensed for private use that it can be sold at such a low price.

The crystal used in this detector is peculiarly sensitive, and this fact, in connection with the admirable and lasting adjustment you are able to get, and the ability of the Ferron crystal to withstand strong signals without burning out—a most common cause for complaint with many other sensitive detectors—have contributed greatly to the high standing of this detector among the thousands of operators throughout the country.

The Ferron crystal is not injuriously affected by the strongest signals, and will usually retain its adjustment for several weeks without attention. The users of Electrolytic and other styles of detectors will appreciate this point.

"Ferron" is a metallic crystal, and is held in a nickeled cup, mounted on the detector stand. An exceedingly fine adjustment of pressure is easily obtained by means of the triple spring, operated by the hard rubber knob.

All the metal parts are nickel plated on brass, and the base is of polished Italian dove marble, measuring 5½ by 3 inches.

This detector operates best without either potentiometer or battery.

Our files are full of voluntary testimonials from enthusiastic operators throughout this country, Canada and foreign countries, recording the excellent results obtained with this most admirable detector.

The following letter was voluntarily written by an operator on one of the steamships lying at the docks at Port Arthur, Texas. He was using the Ferron detector in connection with instruments similar to those in our No. 60X40 receiving set:

"The responder (Ferron detector) is a peach. With it I copied the "City of Memphis," 765 miles; B. N. Boston, 850 miles; New York, N. Y., 1,056 miles, and also Manhattan Beach, while lying here at the dock. How is that for long distances, and over land, too?"

The same operator wrote later as follows:

"My profound felicitations; your detector is certainly a bird, and as the president would say, it has all others done to a frazzle. While in Beverly, Mass., I tested it out with a silicon, and I could get P. C. (35 miles) as loud as I could P. G. (15 miles) on the other, etc., etc."

The following clipping taken from the Toledo News-Bee shows the results Elmer Lamb, a local amateur, has been able to get with the detector. Mr. Lamb is now the wireless operator on one of the steamers on the Great Lakes. The distance from Toledo to Atlantic City is about 700 miles. Mr. Lamb was using our No. 60X39A receiving set with a 2000-ohm head set:

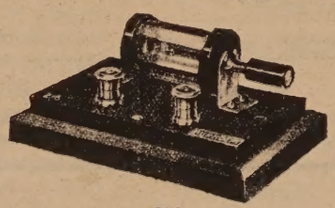
**"Remarkable Feat For Wireless Boy.**

"With a wireless station that cost him just $19, Elmer Lamb, an 18-year Toledo boy, living on Erie near Galena street, on Friday nicked up the U. W. Co.'s 2. K. W. station at Atlantic City, N. J., and a few minutes later picked

The J. J. Duck Co., Catalog No. 6, 1913

# BURNDEPT Crystal Detector

(Prov. Patent No. 23937/23)



216

THIS unusually efficient crystal detector will appeal to all users owing to the ease and certainty with which adjustments are made. Instead of "pushing and pulling" to get best signal strength, just rotate the ebonite handle to obtain micrometer screw adjustment of the gold cat whisker. All parts of the crystal can be explored, and the cat whisker stops just where you put it. The crystal is the new BURNDEPT Synthetic, and is sensitive all over; all working parts are enclosed in a glass tube, and can be assembled (without tools) right or left-handed as desired.

A BURNDEPT "Quality" component of real instrument finish.

No. 215. Crystal Detector Assembly, for mounting on panel, and BURNDEPT Synthetic Crystal in special cup: packed in carton with accurate panel drilling template . .

No. 216. Crystal Detector complete as above, but mounted on engraved ebonite panel, fitted with lacquered terminals, the whole on polished walnut base ready for use . . . . .

No. 217. Carton of spare parts for the above. Each carton contains 3 BURNDEPT Synthetic Crystals mounted in cups, 3 Gold Cat Whiskers mounted in brass adaptors, and 1 spare Glass Tube . . . . . .

No. 218. Carton containing two unmounted BURNDEPT Synthetic Crystals . . .

No. 219. Carton containing three Crystal Cups to fit above Detector, together with a sufficient quantity of Wood's Metal . .

BURNDEPT LIMITED
MANUFACTURERS OF WIRELESS APPARATUS
Head Offices: ALDINE HOUSE, BEDFORD STREET, STRAND, W.C.2

English, 1921

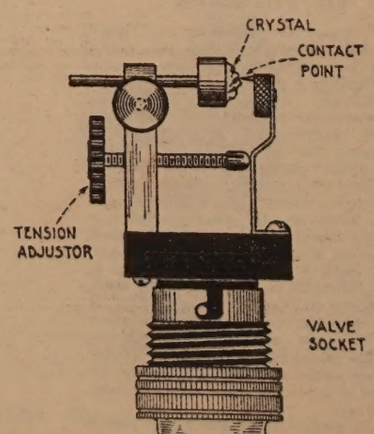


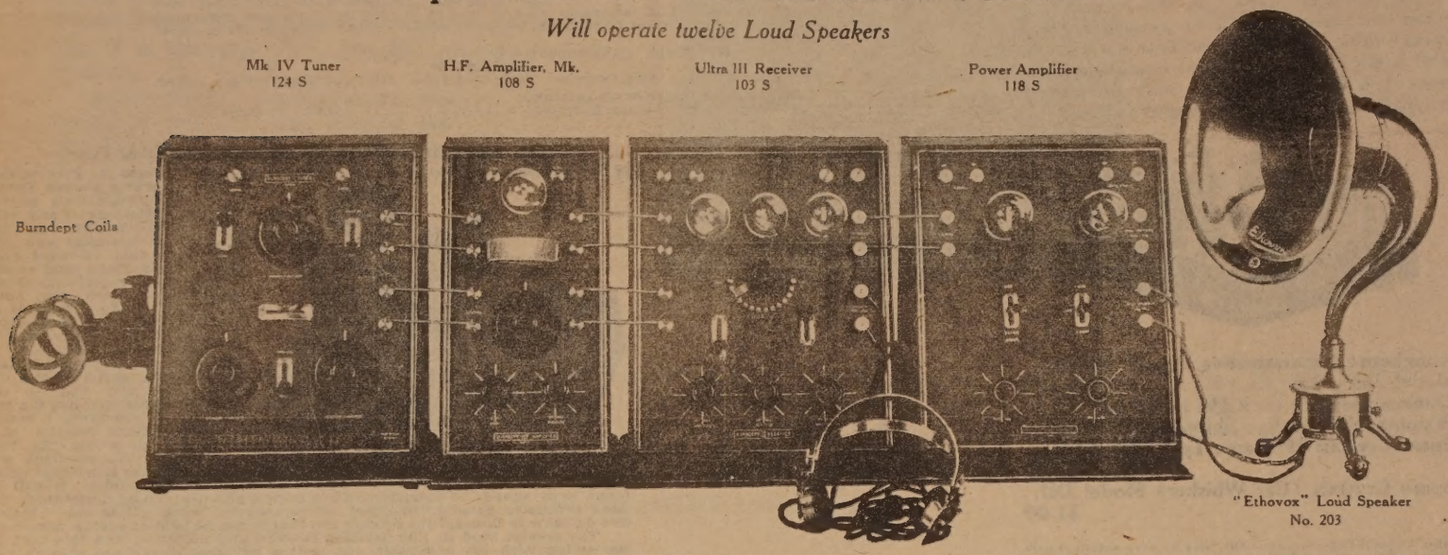

Fig. 163—Carborundum Crystal Holder to Fit Fleming Valve Socket.

Practical Wireless Telegraphy, 1921

STATION No. V

# A Complete Station with Unlimited Possibilities

*Will operate twelve Loud Speakers*




WE illustrate the finest and most complete station offered to the public. It is sufficiently powerful to actuate up to twelve Loud Speakers, and, under favourable circumstances, it has received American Broadcast on a Loud Speaker.

No. 124 S. BURNDEPT Tuner, Mark IV
No. 108 S. BURNDEPT H.F. Amplifier, Mark I
No. 103 S. BURNDEPT Ultra III Receiver
No. 118 S. BURNDEPT Power Amplifier, Mark III
Complete Set of 13 BURNDEPT Coils
No. 184. 1 pair Best Head Telephones, 120 ohms
No. 162. 4 " R. 5 " Valves
No. 168. 2 " L.S. 5 " Valves
No. 152. 2 Accumulators, 75 amp. hrs. (actual)

No. 178. H.T. Battery, in case, 75 volts (large)
No. 412. H.T. Battery, in case, 120–180 volts (large)
No. 203. " Ethovox " Loud Speaker, 120 ohms
No. 420. BURNDEPT Aerial Equipment
No. 233. BURNDEPT Aerial Safety Switch
No. 474. 6 yds. Twin Flexible 40/36
No. 475. 3 yds. Twin Flexible 70/36
No. 129. BURNDEPT Public Address Unit } (optional)
No. 611. Hand Microphone }

**BURNDEPT LIMITED**
MANUFACTURERS OF WIRELESS APPARATUS
Head Offices: ALDINE HOUSE, BEDFORD STREET, STRAND, W.C.2

English, 1924

**BURNDEPT LIMITED**
MANUFACTURERS OF WIRELESS APPARATUS
Factories: AERIAL AND EASTNOR WORKS, BLACKHEATH, LONDON, S.E. 3

Ruggedness Reliability Long Life
Extreme Sensitiveness

# The Marconi V. T.

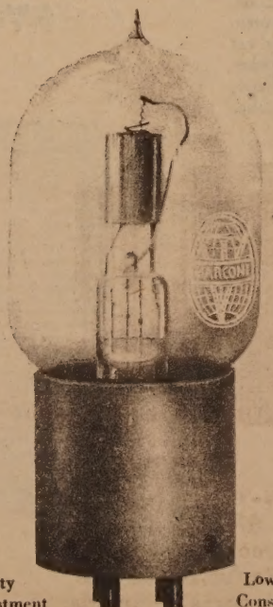
**THREE-ELECTRODE OSCILLATION VALVE OR AUDION**

THE remarkable distances over which wireless signals are now transmitted may be attributed in a large measure to the amplifying properties of the *vacuum tube*. Although continent-to-continent wireless communication has been established with oscillation detectors of lesser degrees of sensitiveness, the Marconi V. T. (three-electrode valve) permits the same distances to be covered with smaller amounts of power.

High power stations often employ several hundred kilowatts of electrical energy, whereas the experimental station is required to operate on a restricted wave length and with the relatively small antenna current of amateur transmitters. A sensitive oscillation detector such as the Marconi V. T. is therefore an essential to communication between low power amateur wireless stations; in fact, this *ultra-sensitive oscillation detector is absolutely necessary to bring the signals up to the point of audibility* when receiving over great distances.

Amateur wireless stations using power inputs of ½ to ¾ kw. and operating at the wave length of 200 meters, *have established wireless communication with similar stations*






Simplicity of Adjustment — Low Current Consumption

The Marconi V. T.
Oscillation Detector

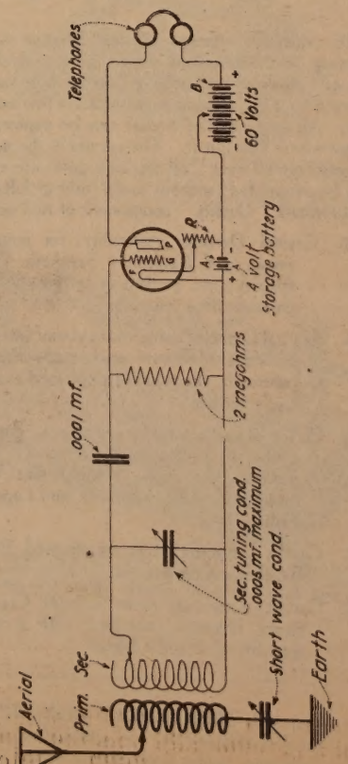



Figure 2.—The preferred detection circuit for the Marconi V. T.

Marconi Wireless Telegraph Company of America, 1920

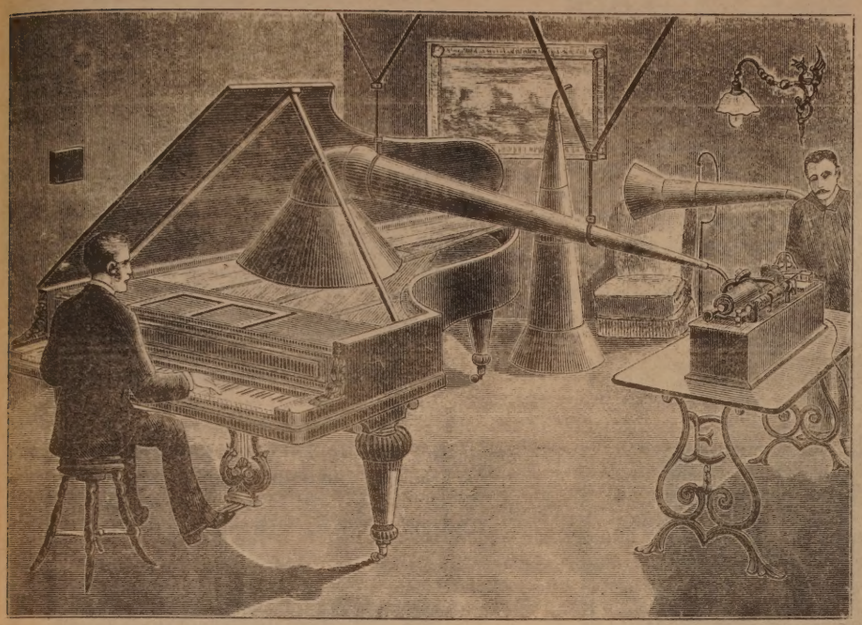


Fig. 1.—APPARATUS FOR REGISTERING PIANO MUSIC BY THE PHONOGRAPH.

Fig. 2.—REGISTRATION OF A CORNET SOLO BY THE PHONOGRAPH.

La Nature, 1880

# Club News

I received your renewal notice here yesterday, stating that my subscription to "The Horn Speaker has expired. Thank you for letting me know. I want to take this means to congratulate you for the publication of a fine paper. It has a most excellent coverage of antique phonographs as well as radio receiving equipment. We are holding our annual Radio Club meeting on the last Sunday of this month. The annual meeting of The Omaha Council Bluffs Radio Club will be hosted by Mr. Arthur Trauffer, Curator of the Doctor Lee deForest Memorial Museum, and Mr. Stephen Meyerman. The meeting will be held at the upstairs museum of Stephen Meyerman, 152-1/2 West Broadway, Council Bluffs, Iowa. Members are urged to bring any antique wireless or phonograph equipment which they may want to swap.

My Sincerest regards,
Howard C. Bergstrom
5142 Grant Street 10-21-78
Omaha NB 68104

# LETTERS

Dear Jim:

Check for $5.50 attached. Its a plessure. Too bad about Jim Fred's Antique Radio Topics. As a publisher, wish I could think of a way to boost circulation for you guys.

That's what keeps you alive.

Cheers and 73's
George Kitchen
137 New Bridge Rd.
New Milford, N.J. 07646

EDITOR...thanks for the kind words about Jim Fred and us.

# MART

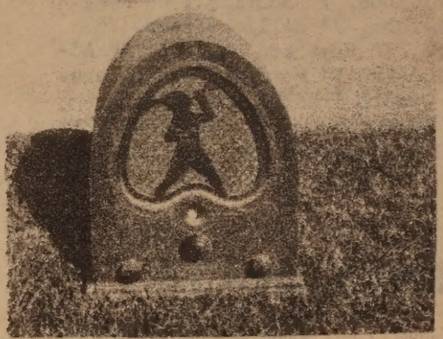
**Classified ad rate: 6¢ per word.**
**Photo ads: $2.00 extra.**

**Deadline: 20th of the preceding month.**

SPECIAL

PHOTO ADS will be repeated at no extra charge up to 3 times unless you cancel.

**FOR SALE: Victor VV-VI: works, excellent appearance, $90.00, shipping. From Tinfoil to Stereo, brand new (Sams) $9.00 ppd. Evolution of the Phonograph, six part serial (November 1955 thru May 1956 Radio News), complete, $20.00 ppd. Greg Dockter, 2519 Ave. C, Bismarck, N. Dak. 58501.**

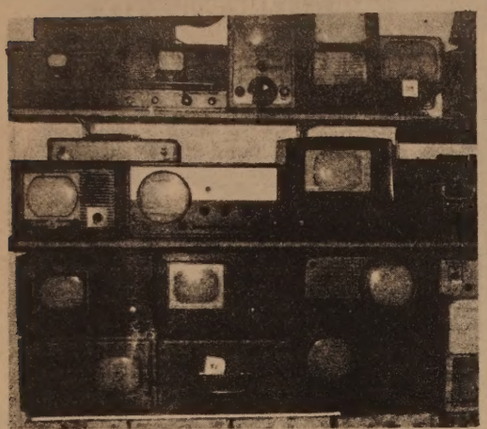


**FOR SALE: Gilfillan Peter Pan cathedral $275. or best offer. Have many more old radios, send $1. for list. Chuck, 925 Starlite, Grants Pass, Oregon 97526. Ph: 503 476-1078.**

**ATWATER KENT REPLICAS Bread Board switches - $10.00, front plates for variometer, variocoupler, and T11 tuners - $8.50. AK thumb nuts, SASE for sample. Replicas of any dial or knob. WD11 or UV99 adaptor - $5.50, 2 for $10.00pp.**
**K. Parry, 17557 Horace, Granada Hills, CA 91344.**

**FOR SALE: Brown British horn circa 1926. Unusually small size (12 inches tall, 7 inch bell). Excellent condition, working. $115.00 ppd. Greg Dockter, 2519 Ave. C, Bismarck, N. Dak. 58501.**

## FOR SALE OR TRADE



OLD TELEVISIONS: Three inch Pilots, 7" Teletone, 7" Sentinel, 8" RCA, 7" Emerson, 7" Hallicraftors, 7" Philco, 7" Raytheon/Belmont, 7" Admiral, also 7" Motorola and others. Have Zenith Transoceanic radio. Send $1.00 for list. Charles, 925 Starlite, Grants Pass, Oregon 97526. Call Charles 503 476-1078.

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Single issues...$1.00 each
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### The Horn Speaker

Box 12 Kleberg, Texas 75145

## FOR SALE OR TRADE

FOR SALE: Please take note if: You are restoring a prized antique battery radio. We can supply ten conductor cable housed in an original type brown cloth knitted sheath to replace your torn and tattered battery cable. Use as many conductors as required and then discord the rest. The price is 75¢/foot plus shipping. Write: Olde Tyme Radio Co., 2445 Lyttonsville Rd., Silver Spring MD 20910.

FOR SALE - Radios 1930s. Clarion Cathedral $75. Philco #57-C $65. RCA 85T1 $50. Emerson 1933 $50. Crosley $40. Echo Cathedral no chassis $20. Silvertone Farm $45. Zenith big black round dial $85. Packard Bell $20. RCA tall wood case $50. Federal nice wood $75. Airline wood $45. Arvin $20. Firestone $20. Atwater Kent $100. Knight $35. Motorola wood $45. Chanticleer $50. RCA $20. More. SPEAKERS: AK horn $20. papiermache horn $20. Miller horn $15. no drivers,bases. Magnovox speaker $35. Sonora $35, more. Several battery radios from 1920s. Everything sold as found. Have new interests and will consider any offers. Call on phone only! Charles Seidel: 1-503 476-1078.

## FOR SALE OR TRADE

FOR SALE: Early battery radio 12 tubes rare. Best offer over $250. or trade for outside horn phonograph. Chuck, 925 Starlite, Grants Pass, Oregon 97526. Ph: 503 476-1078.

FOR SALE: Solid State "A", "B" and "C" power supply for operation of 1920's battery radios. Price $109.50 postage paid. Send SASE for information to: Gary Schneider, 6848 Commonwealth Blvd., Parma Hgts, OH 44130.

FOR SALE: Early elect.table radios, small wood case radios (AC-DC), speakers, tubes, service notes, parts, test eqpt., meters, too much to list. Write wants, SASE a must. Krantz, 100 Osage Ave., Somerdale N.J. 08083.

FOR SALE: Reproduced 1926-1948 radio schematics w/alignment procedures. TV schematics also available. Send model and/or chassis number plus $2. or diagram plus $3. to: Antskematics, J. F. Antski, 311 Bear Ridge Rd., Pleasantville N.Y. 10570.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Act of August 12, 1970: Section 3685, Title 39, United States Code).

1. Title of publication: THE HORN-SPEAKER.
2. Date of filing: Sept. 28, 1978
3. Frequency of issue: Monthly except during July and August.
4. Location of known office of publication(street, city, county, state, zip code): 9820 Silver Meadow Dr., Dallas, Texas 75217.
5. Location of the headquarters or general business offices of the publishers (Not printers): 9820 Silver Meadow Drive, Dallas, Texas 75217.
6. Names and addresses of publishers, editor, and managing editor: Publisher: Jim Cranshaw, 9820 Silver Meadow Drive, Dallas, Texas 75217. Editor: Jim Cranshaw, 9820 Silver Meadow Drive, Dallas, Texas 75217. Managing Editor: Jim Cranshaw, 9820 Silver Meadow Drive, Dallas, Texas 75217.
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8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities (if there are none, so state): None.
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Jim Cranshaw
(Signature of editor, publisher, business manager, or owner)

FOR SALE: Collector is reducing collection, sets speakers, tubes, books magazines, test eqpt. 48 years in radio repairs for details send large SASE. Krantz, 100 Osage Ave., Somerdale N.J. 08083.

FOR SALE; Rare original old radio programs 1928-1936 on cassettes. FIVE HOURS $25.00. Includes wide variety, comedy - news- music. Fine sound quality. Guarenteed. Blalock's Sound Library, 1614 Davison, Richland WA 99352.

## WANTED

WANTED: Old microphones, working or not. Let me know what you have and price. W. Turner, P.O. Box 13069, Arlington TX 76013.

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DALLAS, TEXAS 75219
* EVENINGS - 214-262-7855

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*All material is sold on the value of the contents. Please allow two weeks for shipment. Most everything is "one of a kind", so call or write early to assure shipment....first order, first sold. Thanks for your business in the past, and I will look forward to hearing from you in the future.....Walt*

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744 Sylvania News, these are in a loose leaf notebook, and start with January, 1946 and go to 1957, I have not checked if all issues are there, but there are a lot of them $8.00
745 Sylvania technical Manual, st-tested radio tubes, 1936 182 pages, $4.00
746 Servicing TV receivers, Sylvania, 1950, $4.00
749 40 uses for Germanium Diodes, $2.00
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**TYPE J-7-A**
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Beautiful heavy duty construction, in new working condition. For the collector, antique buff and antique gear museums. An unusual conversation piece, curio, desk weight and gift.

In 1966 the U.S. Navy closed the hugh Brooklyn Navy Yard and the City of New York purchased the property. The J7A Keys were discovered in a warehouse where they had been stored for the past 50 years.

New boxes have been provided.

Both keys are of heavy duty construction with a large Navy type knob. The keying arm and dome are brass . . . the contacts are ¼ inch coin silver. The J7A is 2½ x 5½ inches and the J5A is 2½ x 3¼ inches in size. The BULB, or Lamp is NOT supplied with the J7A.

**A RARE FIND! ORDER TODAY 19.95 ppd**

The J5A was made for the Signal Corps in 1941, and is the same type of Key except for the Dome housing the neon bulb. A real memento of WWII. Supply is somewhat limited .... buy today!

**19.95 ppd**

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FOR SALE - Collection of 25 radios of 20s and 30s, Grebe, Music Master, Radiola, early electrics, speakers, also four nice phonographs, all for $950. or offer. SASE for list. SALE OR TRADE - Rider Radio Vol. 1-5 abridged, 11, 12, 14, 15, 16, 18, PA 1. Want Vol. 1, 2, 3 and 9. Anyone have Ozarka 16 tube chassis? For sale or not would like to hear from you. Ray Miner, Ft. Madison, Iowa 52637. Ph: 319 372-1271.

## FOR SALE OR TRADE

FOR SALE: Automatic Orthophonic Victrola VE10-50. Near mint original, with all instruction books. Second owner. Make cash offer, no trades, to: Herb Cooley, 57 Adams, Akron, Colorado 80720. PH: 1 303 345-6616.

FOR SALE: Tubes for radios of the thirties and fourties, brand new in original factory boxes. Very reasonable, send us your list of requirements for a quotation. Daniel Gaidosz, 342 West River Road, Orange Conn. 06477.

## FOR SALE OR TRADE

COLLECTORS: Page after page of Classifieds from other collectors, hams, CBers, hobbyists in "Electronics Trader", only 10¢ a word. Next four big issues only $2.00. Electronics Trader, Box 1333, Sun Valley CA 91352.

FOR SALE: Victrola VV-XXV "School Machine", second owner. New never been sold at retail. Near mint original. Make cash offer, no trades, to Herb Cooley, 57 Adams, Akron, Colorado 80720. Phone: 1 303 345-6616.

FOR TRADE: Ancient radio receiving sets, tubes, parts, catalogues and magazines. What have you? My list for yours. Howard C. Bergstrom, 5142 Grant Street. Omaha NB 68104.

FOR SALE: Antique Ammeter in polished wooden case and has a mirrored scale. 7-1/8" X 7-5/16" X 3-1/8" deep. Mfd. by Queen & Co., Phila., PA. - $65.00. J. Albert Warren, Box 279, Church St., Waverly PA 18471.

FOR SALE: High-voltage capacitors for Hallicrafters 7-inch television sets. Send SASE for information. C. H. Server, 256 West 88th St., New York NY 10024.

FOR SALE: Old Radios, speakers, etc. Sale or trade. SASE. Rosenthal, 507 S. Maryland Ave., Wilmington DE 19804.

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**DeForest LOOP ANTENNA**

Beautifully prefinished and assembled with over 100 machined brass fittings and Bakelite parts, with a DeForest decal. Fits all D-7, 7A, 10, 12, and 17 sets. "DeForest wire included."

$67.50 postpaid

10% to AWA Museum fund.

**RADIOLA LOOP ANTENNA AG-814**

Precut Mahogany frame with an etched brass name plate and 1924 instruction card. This loop is a great addition to any collection and fun to assemble. Includes radiola type wire.

$43.50 postpaid 10% to AWA Museum fund.

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Unfinished Mahogany is precision cut to the 1922 pattern. Needs only staining to complete your rare and unusual radio.

PRICE $15.50 postpaid

**Radiola Antenna Wire**

Multi strand copper wire with a brown braided Celulon cover just like the original 500' roll —

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Smaller Lengths — 9¢ ft.

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Always missing, this solid Maple reproduction is the crowning compliment to another uncommon set. Unfinished.

PRICE $19.50 postpaid

"NEW"

**DeForest Type Green Wrapped Litz Wire Avail.**

100' Roll

PRICE $10.00 postpaid

**H-10 POWER SUPPLY**

Now! For the first time a premium quality power supply. The H-10 power supply is made of specially designed and the highest quality components (not surplus or used parts).

And it's not being assembled in someone's garage. The H-10 has been contracted by a top-rate manufacturer who builds power supplies primarily for the laser industry. Thus it is fully warranteed for a full year.

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The Model H-10 contains three independent, electrically isolated, regulated power supplies. The "A" supply provides 12 switched outputs between 1.1 and 9V. The "B" supply can deliver up to 6 *simultaneous* regulated outputs. The "C" supply can deliver up to 8 *simultaneous* outputs. All outputs feature electronic short circuit protection.

TYPICAL SPECIFICATIONS

| | |
|---|---|
| Input | 117V AC, 50-60Hz, 90W maximum. |
| Volts | 1.1, 1.5,2.0, 2.5, 3, 3.3, 4.5, 5, 6, 7.5, 8, 9 |
| "A" Output | Single output switch selected, short circuit protected, ripple less than five millivolts RMS @ 5V and 5A, regulation 0 to full load .02% @ 5V, voltage tolerance 5%, overload protection. Using the 1.1V, 3.3V and 5.0V output, allow operation of appropriate tubes with no danger of burn-out from improper filament rheostat adjustment. |
| "B" Output | 22.5V, 45V, 67.5V, 90V, 135V and 180V may be used in any combination with a maximum total output of 50mA. Ripple is less than five millivolts RMS @ 22.5V and 50mA to less than 25mV RMS @ 180V and 50mA, voltage tolerance 5%, voltage regulation 0-50mA 2.5%, fold-back current limiting. |
| "C" Output | 1.5, 3.0, 4.5, 9, 10.5, 13.5, 16.5 and 22.5V; 50mA @ 22.5V, ripple less than five millivolts, voltage tolerance 5% regulation 0.1% at 22.5V All other voltage obtained by a 25mA resistive voltage divider. Overload protected. |
| Controls | Power switch, "A" voltage selector switch, LED pilot light. |
| Line Cord | Three-wire, 6ft., heavy duty. |
| Size | 3½" H. x 5¼" W. x 9½" L. (includes controls). |
| Weight | 5 lbs., 14 oz. |
| Limited Warranty | Warranty is limited to repair or replace, at our option, of any defect in materials or workmanship for a period of one year. Warranty does not cover shipping costs. |
| Ordering Information | Include check or money order for $149.95 to Glenn S. Streeter, 4133 Via Nivel, Palos Verdes Estates, CA 90274. We will pay shipping by UPS. |

SATISFACTION GUARANTEED ON ALL ITEMS OR RETURNED FOR FULL REFUND.

GLENN S. STREETER

4133 VIA NIVEL, PALOS VERDES ESTATES, CA 90274 - (213) 375-5522



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FOLLOW THE ROAD TO OLD-TIME RADIO DAYS. ENJOY YESTERYEAR, AND DISCOVER THE NEW HOBBY OF RADIO COLLECTING.

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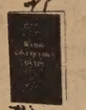
VINTAGE RADIO, 1887-1929: Pictorial story of pioneer days, 1,000 photos, 263 pages. $10.95 hard-cover, $8.95 soft.



RADIO COLLECTOR'S GUIDE, 1921-32: Data book with 50,000 facts on 9,000 models by 1,100 makers, 264 pages, $6.95.

RADIO ENCYCLOPEDIA: Gernsback's 1927 classic beautifully recreated, 175 pages. $14.95 hard-cover, $10.95 soft.

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CIRCUIT DIAGRAMS for any pre-1951 radio, just $3.50. Send model number.

IDEAL GIFTS — Vintage Radio — WE PAY POSTAGE

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Kleberg TX 75145

## WANTED

CATHEDRALS WANTED: Restorable AC sets. Also Edison radio/phono., Radiola 24 and 26, DeForrest D-10, chassis/speaker, Philco 26/48 floor model working or restorable. Pat O'Hern, P.O. Box 55456, Houston, Texas 77055.

WANTED: 1933 Emerson Mickey Mouse radio. Write or call collect. Les Sims, 5551 W. Lover's Lane, Dallas TX 75209. Ph: 214 352-9757.

WANTED: Spark type Diathermy Machines or gaps from same. Condition unimportant as long as gaps intact. Bob, W6ME, 4178 Chasin St., Oceanside, Calif. 92054.

WANTED: "Radio News" for March 1925, also "Radio News" for all months of 1922 - all with covers. Albert Warren, Box 279, Church St., Waverly PA 18471.

WANTED: A picture of a Zenith Cathedral model L. A polerold will so. Most of the grill on mine is broken and lost. Need picture for restoration. Also need chassis for Jackson Bell model 84 (Ryders VIII Misc. Pg 803) Russ Goodlive, 1401 Franchere Pl., Sunnyvale CA 94087.

Wanted: Can anyone I.D. my Philco Radio? It has dark green metal cabinte (table type), A.C. chassis, has same tube compliment as my Radiola model 18. Appears similar to schematic for Philco model 87, except has one #71A tube where #87 has 2 #45's. I need top and an appropriate speaker. Has anyone a rebuilt or good used 21YP4 picture tube (or equivalent)? Also need schematic for Philco model 30-12. Does anyone have a schematic or list of Xtals useable with a Saturn 100 C.B. transceiver, model M.M. 2 made by Muasvrematic Co. of New Hampshire?
John G. Bayusik, 311 Grandview Ave., Hamden CT 06514.

WANTED: RCA Radiola 20, Kennedy, Gilfillan, Pilot Super Wasp, AK, AC Dayton XL 25, Grebe Synchrophase, Cathedral and other pre-1935 table radios; Vintage horn or cone loudspeakers, headphones and tubes. Please state model, condition and price with reply. Dave Pearce 673 Sylvan Ave., North Vancouver, B.C. Canada V7R 2E8.

## WANTED

WANTED: Any early AC Radios using Kellogg 401 tubes or Cardon 373 tubes, including tubes, parts, original literature.
Rosenthal, 507 S. Maryland Ave., Wilmington DE 19804.

WANTED: Wood table model plug-in radios, especially Cathedrals. Also outside horn phonographs, music boxes, needle tins, record dusters, catalogs, etc. Lloyd, 4618 Adams St., Hollywood FL 33021.

# WANTED

ZENITH ZEPHYR
(page 191 Vintage Radio)

**End-Table Radio Receiver**

*Three-band super in end-table cabinet*

Available in six and ten-tube super models, this modern end-table receiver is built for domestic broadcasts, short-wave and foreign reception. Placed alongside an arm chair, divan or day bed it is convenient to tune. A plate-glass panel protects the dial and slides out of sight when set is in operation. A hinged top covers a utility compartment in the rear which provides storage space for your log and magazines. Provision has been made for an all-wave doublet antenna connection and the set may be used with hard-of-hearing aid if desired.

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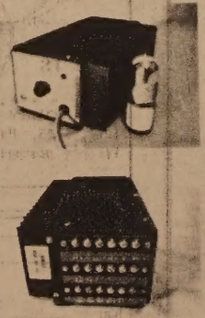
## H-10 POWER SUPPLY



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# PUETT ELECTRONICS

P.O. BOX 28572 DALLAS TEXAS 75228
PUBLISHERS OF
THE CLASSIC RADIO NEWSLETTER

(send 13¢ stamp for newsletter sample)

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WE CAN FURNISH SCHEMATICS ON ANY RADIO (1920 to 1954) - $1.50 postpaid. IF YOU CAN NOT FURNISH THE NAME OF THE MANUFACTURER AND THE MODEL NUMBER, SEND THE TYPES AND QUANTITY OF TUBES AND WE WILL RESEARCH OUR FILES FOR A SIMILAR SET WHICH USES THE SAME TUBES - RESEARCH $3.00 postpaid.

**NEW ACQUISITIONS LIST**
01A, 99, WD-11, etc. when in stock, ANTIQUE RADIO SETS AND TEST GEAR, ANTIQUE RADIO BOOKS, AND OTHER "one at a time" items-- list sent by first class mail four to six times a year by subscription -- $2.00 per year.

**BALLAST TUBES** send for catalog.

THE PUETT ELECTRONICS SUPER ANTENNA - GROUND SYSTEM plans $2.

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**HOW TO ORDER** List No. 17

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**POLICY**

**CUSTOMER SATISFACTION GUARANTEED** If you are not satisfied with your order for any reason, tubes may be returned within ten days for refund or replacement with exception of tubes which are shorted or have open filaments. It will be assumed that retufned tubes with open filaments or shorts were damaged in shipment. Shipping damage claims will be handled promptly through the post office on insured orders. PUETT ELECTRONICS assumes no liability for orders which are not insured, and no liability beyond that which is covered by postal insurance. The tubes listed herein are either new, military pull-outs, factory over-purchases, or used. If only new tubes in original cartons are acceptable, add 10% to the total cost of your tube order. REFUNDS are mailed with your invoice for out-of-stock merchandise. ALL TUBES ARE THOROUGHLY TESTED ON A MUTUAL CONDUCTANCE TUBE CHECKER BEFORE SHIPMENT. ALL TUBES MUST MEET NEW TUBE STANDARDS WHEN CHECKED. All prices are subject to change without notice. All tube prices listed herein supersede prices in previous lists and ads. We offer free technical advice for a 13¢ stamp or you may call J. W. F. Puett NO LATER THAN 10:00 PM CENTRAL STANDARD TIME - PLEASE.

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| | | | | | | | | 7B8 | $4 | 12Q7 | $4 | 25L6 | $3 | 50Y7 | $4 |
| | | | | | | | | 7C5 | $3 | 12S8 | $3 | 25S | $4 | 51 | $4 |
| | | | | | | 6S4 | $4 | 7C6 | $4 | 12SA7 | $3 | 25Z5 | $3 | 55 | $5 |
| | | | | | | 6S8 | $4 | 7C7 | $4 | 12SC7 | $3 | 25Z6 | $3 | 56 | $3 |
| | | | | | | 6SA7 | $3 | 7E6 | $4 | 12SF5 | $3 | 26 | $6 | 57 | $4 |
| | | | | | | 6SB7 | $3 | 7E7 | $4 | 12SF7 | $3 | 26A6 | $4 | 58 | $4 |
| | | | | | | 6SC7 | $3 | 7F8 | $5 | 12SQ7 | $3 | 26A7 | $4 | 59 | $6 |
| | | | | | | 6SD7 | $3 | 7G7 | $4 | 12SH7 | $3 | 27 | $4 | 70A7 | $3 |
| | | | | | | 6SF5 | $3 | 7H7 | $4 | 12SJ7 | $3 | 28D7 | $3 | 70L7 | $5 |
| | | | | | 6C5 | $3 | 6SF7 | $3 | 7J7 | $4 | 12SK7 | $3 | 30 | $5 | 71A | $7 |
| | | | | | 6C6 | $4 | 6SG7 | $4 | 7L7 | $4 | 12SL7 | $3 | 31 | $4 | 75 | $4 |
| | | | | | 6C7 | $4 | 6SH7 | $3 | 7Q7 | $4 | 12SN7 | $3 | 32 | $4 | 76 | $3 |
| | | | | 5Y4 | $3 | 6C8 | $4 | 6SJ7 | $3 | 7R7 | $4 | 12SQ7 | $3 | 33 | $4 | 77 | $4 |
| | | | | 5Z3 | $3 | 6D6 | $4 | 6SK7 | $3 | 7S7 | $4 | 12SR7 | $3 | 34 | $4 | 78 | $4 |
| | | | | 5Z4 | $3 | 6D7 | $4 | 6SL7 | $3 | 7V7 | $4 | 12V6 | $3 | 35 | $4 | 79 | $4 |
| | | | 1T5 | $3 | 6A3 | $5 | 6D8 | $4 | 6SN7 | $2 | 7W7 | $4 | 12X4 | $2 | 35A5 | $4 | 80 | $3 |
| | | | 1U4 | $3 | 6A4 | $6 | 6E5 | $5 | 6SQ7 | $3 | 7X6 | $4 | 12Z3 | $2 | 35B5 | $2 | 81 | $6 |
| | | | 1U5 | $3 | 6A5 | $4 | 6E6 | $4 | 6SR7 | $3 | 7X7 | $4 | 14A4 | $4 | 35C5 | $2 | 82 | $3 |
| | | 1G4 | $4 | 1V | $5 | 6A6 | $4 | 6E7 | $4 | 6SS7 | $3 | 7Y4 | $4 | 14A5 | $4 | 35L6 | $3 | 83 | $3 |
| 0D3 | $2 | 1G5 | $4 | 1Y | $5 | 6A7 | $5 | 6F5 | $4 | 6ST7 | $3 | 7Z4 | $3 | 14A7 | $4 | 35W4 | $2 | 83V | $3 |
| 0Z4 | $3 | 1G6 | $4 | 2A3 | $7 | 6A8 | $4 | 6F6 | $4 | 6SU7 | $3 | 10 | $7 | 14B5 | $3 | 35Y4 | $4 | 84 | $3 |
| 1A1 | $5 | 1H4 | $5 | 2A4 | $5 | 6AB4 | $3 | 6F7 | $6 | 6SV7 | $3 | 12A5 | $4 | 14B6 | $4 | 35Z3 | $4 | 85 | $4 |
| 1A3 | $4 | 1H6 | $4 | 2A5 | $4 | 6AB7 | $3 | 6F8 | $4 | 6T7 | $4 | 12A6 | $4 | 14B8 | $4 | 35Z4 | $4 | 89 | $4 |
| 1A4 | $4 | 1J6 | $4 | 2A6 | $4 | 6AC5 | $3 | 6G5 | $5 | 6U5 | $5 | 12A7 | $4 | 14C5 | $3 | 35Z5 | $3 | 117L7 | $5 |
| 1A5 | $4 | 1L6 | $8 | 2A7 | $5 | 6AC7 | $3 | 6G6 | $3 | 6U7 | $5 | 12A8 | $4 | 14C7 | $4 | 35Z6 | $4 | 117M7 | $5 |
| 1A6 | $3 | 1LA4 | $4 | 2B7 | $4 | 6AK5 | $2 | 6H6 | $2 | 6V6 | $2 | 12AH7 | $3 | 14E6 | $4 | 36 | $4 | | |
| 1A7 | $3 | 1LA6 | $4 | 2E5 | $5 | 6AL5 | $3 | 6J5 | $3 | 6V7 | $4 | 12AT6 | $2 | 14E7 | $4 | 37 | $4 | | |
| 1B4 | $4 | 1LB4 | $4 | 2X2 | $3 | 6AL7 | $5 | 6J6 | $2 | 6X4 | $2 | 12AT7 | $2 | 14F7 | $4 | 38 | $3 | | |
| 1B5 | $4 | 1LC5 | $5 | 3A4 | $3 | 6AQ5 | $2 | 6J7 | $4 | 6X5 | $2 | 12AU6 | $2 | 14F8 | $4 | 39 | $3 | | |
| 1B7 | $4 | 1LC6 | $4 | 3A5 | $3 | 6AT6 | $2 | 6J8 | $4 | 6Y5 | $3 | 12AU7 | $2 | 14H7 | $4 | 40 | $7 | | |
| 1B8 | $4 | 1LD5 | $4 | 3A8 | $4 | 6AU6 | $2 | 6K5 | $3 | 6Z4 | $3 | 12AV6 | $2 | 14J7 | $4 | 41 | $4 | | |
| 1C1 | $4 | 1LE3 | $4 | 3C6 | $4 | 6AV6 | $2 | 6K6 | $3 | 6Z5 | $3 | 12AX7 | $2 | 14N7 | $4 | 42 | $4 | | |
| 1C5 | $3 | 1LF3 | $4 | 3LF4 | $5 | 6AX5 | $2 | 6K7 | $4 | 6Z7 | $2 | 12B7 | $4 | 14Q7 | $4 | 43 | $4 | | |
| 1C6 | $3 | 1LG5 | $4 | 3Q5 | $3 | 6B4 | $5 | 6K8 | $4 | 6ZY5 | $3 | 12B8 | $4 | 14R7 | $4 | 44 | $3 | | |
| 1C7 | $5 | 1LH4 | $4 | 3V4 | $3 | 6B5 | $5 | 6L5 | $4 | 7A4 | $4 | 12BA6 | $2 | 14W7 | $4 | 45 | $6 | | |
| 1D5 | $5 | 1LN5 | $4 | 5AZ4 | $5 | 6B6 | $5 | 6L6 | $3 | 7A5 | $3 | 12BE6 | $2 | 14X7 | $4 | 47 | $7 | | |
| 1D7 | $5 | 1N5 | $4 | 5R4 | $2 | 6B7 | $5 | 6L7 | $4 | 7A6 | $4 | 12C5 | $3 | 15 | $7 | 48 | $4 | | |
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| 1E7 | $4 | 1P5 | $4 | 5U4 | $2 | 6BA6 | $2 | 6N6 | $4 | 7A8 | $4 | 12F5 | $3 | 22 | $7 | 50 | $7 | | |
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| 1F5 | $4 | 1R5 | $2 | 5W4 | $2 | 6BJ6 | $2 | 6P5 | $3 | 7AG7 | $4 | 12J5 | $3 | 25A6 | $3 | 50B5 | $2 | | |
| 1F6 | $4 | 1S5 | $2 | 5X4 | $3 | 6C4 | $2 | 6Q7 | $4 | 7B4 | $4 | 12J7 | $4 | 25A7 | $3 | 50C5 | $2 | | |

| | |
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| 117N7 | $7 |
| 117P7 | $7 |
| 117Z3 | $3 |
| 117Z4 | $4 |
| 117Z6 | $4 |
| 485 | $5 |
| 884 | $7 |
| 950 | $5 |
| 951 | $5 |
| 955 | $4 |
| 958 | $4 |
| 1201 | $4 |
| 1203 | $4 |
| 1232 | $4 |
| 1273 | $4 |
| 1852 | $3 |
| 1853 | $3 |
| 9002 | $3 |
| 9003 | $3 |
| 9004 | $4 |
| VR-90 | $2 |
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P.O. BOX 28572 DALLAS TEXAS 75228
PUBLISHERS OF
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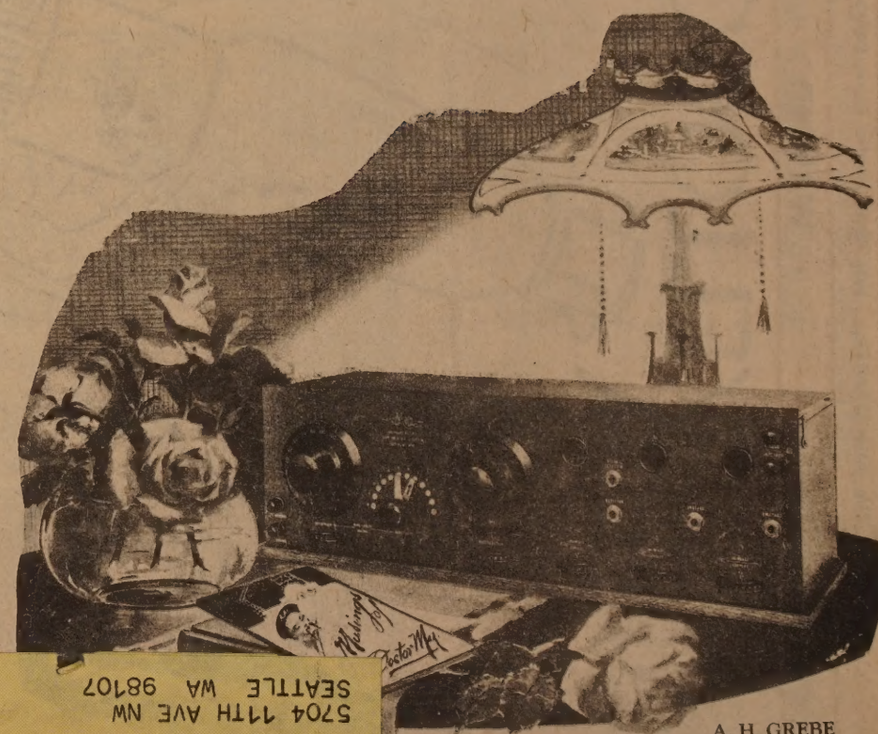
NOVEMBER 75c

# THE HORN SPEAKER

1978



A. H. GREBE

5704 11TH AVE NW
SEATTLE WA 98107

Mr. Art B. Corbus
4501 Greenwood Ave. N. #105
Seattle WA 98103